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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,514	12/05/2001	Kenneth H.P. Chang	SSI004US	6445

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PATENT LAW OFFICES OF DAVID MILLERS
6560 ASHFIELD COURT
SAN JOSE, CA 95120

EXAMINER	
SKED, MATTHEW J	

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/010,514	CHANG, KENNETH H.P.	
	Examiner	Art Unit	
	Matthew J Sked	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *1/30/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. The specification makes reference to U.S. patent application 09/849,719 but does not list it on the IDS.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, 6, 9-11, 17, 18, 21-23 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Taniguchi et al. (U.S. Pat. 6,484,137).

As per claim 1, Taniguchi teaches a process comprising:

preprocessing audio data to determine parameters associated with time scaling of the audio data (preprocesses the audio to determine a control signal for the data expanding/compressing means, col. 13, line 66 to col. 14, line 33);

providing the audio data and the parameters to a device (outputs a control signal to the data expanding and compressing means, col. 14, lines 22-33); and

having the device use the parameters in time scaling the audio data to generate time-scaled audio, wherein using the parameters in the time scaling requires less processing power than would time scaling of the audio data without using the parameters (the control signal indicates if the frame should be compressed, expanded or neither and because it has the "through" command, which would mean no compression or expansion, this would save processing power by not having to time scale every frame, col. 14, lines 22-33).

4. As per claim 3, Taniguchi teaches recording the audio data and the parameters on a storage media that the device can read and the device accessing the storage media to read the audio data and the parameters (both the control signal and the audio data are used in the data expanding/compressing processing means hence they must inherently be stored or buffered in a means that can be accessed by the data expanding/compressing means, Fig. 1).

5. As per claim 6, Taniguchi teaches

the audio data comprises a plurality of input frames (system counts the frames, col. 14, lines 11-21); and

the parameters comprise one or more offsets for each input frame, each offset identifying for an associated input frame a block of samples for use in generating time-scaled data from the associated input frame (determines for each frame a control signal to identify which frames to compress, expand or perform a through process, hence a block of samples (the frame) is identified for use in time scaling, col. 13 line 66 to col. 14, line 33).

6. As per claim 9, Taniguchi teaches

the audio data comprises a plurality of input frames (system counts the frames, col. 14, lines 11-21); and

one or more of the parameters classify respective audio contents of the input frames (determines the probability that each frame contains an audio signal or noise and uses this probability in determining the control signal, col. 19, line 66 to col. 20, line 26 and lines 38-59).

7. As per claim 10, Taniguchi teaches the parameters identify which of the input frames represent silence (determines the probability that each frame contains an audio signal or noise and uses this probability in determining the control signal, col. 19, line 66 to col. 20, line 26 and lines 38-59).

8. As per claim 11, Taniguchi teaches processing the input frames that the parameters indicate represent silence differently from processing of the input frames that the parameters indicate are not silence (determines the probability that each frame contains an audio signal or noise, which indicates silence, and uses this probability in determining the control signal, col. 19, line 66 to col. 20, line 26 and lines 38-59).

9. As per claim 17, Taniguchi teaches a process for time scaling of audio, comprising:

receiving a frame of audio data with parameters indicating a relation between offset and time scale (data expanding/compressing means and control means receive the audio data and a frame sequence, col. 14, lines 11-33 and Fig. 1);

using the parameters to determine an offset that corresponds to a selected time scale (data expanding/compressing control means determines the time scaling process to perform on the current frame, col. 14, lines 11-33 and Fig. 1); and

generating a time-scaled frame using samples that are in a block identified by the offset (data expanding/compressing means time scales the data based upon the control signal, col. 14, lines 11-33 and Fig. 1).

10. As per claim 18, Taniguchi teaches the parameters comprise a plurality of preprocessed offsets that respectively correspond to a plurality of time scales (the frame sequence has a plurality of process indicators that indicate the time scaling process to use, Table 3).

11. As per claim 21, Taniguchi teaches an audio data structure, comprising:

a plurality of frames respectively corresponding to sections of audio, each frame comprising a plurality of samples of the corresponding section of audio (system unpacks the audio bit stream into frames which would inherently have a plurality of samples, Fig. 1, element 101); and

one or more parameters for each frame, the parameters providing information that reduces an amount of processing power needed for time scaling the audio data (the

control signal indicates if the frame should be compressed, expanded or neither and because it has the "through" command, which would mean no compression or expansion, this would save processing power by not having to time scale every frame, col. 14, lines 22-33).

12. As per claim 22, Taniguchi teaches the one or more parameters for a frame identify a block of the samples that is used to generate time-scaled data (determines for each frame a control signal to identify which frames to compress, expand or perform a through process, hence a block of samples (the frame) is identified for use in time scaling, col. 13 line 66 to col. 14, line 33).

13. As per claim 23, Taniguchi teaches each parameter for a frame identifies a block of the samples that is used to generate time-scaled data from the frame (determines for each frame a control signal to identify which frames to compress, expand or perform a through process, hence a block of samples (the frame) is identified for use in time scaling and since each frame has one parameter each parameter identifies a block of samples, col. 13 line 66 to col. 14, line 33).

14. As per claim 25, Taniguchi teaches one or more parameters indicate which of the frames correspond to silent sections of the audio (determines the probability that each frame contains an audio signal or noise and uses this probability in determining the control signal, col. 19, line 66 to col. 20, line 26 and lines 38-59).

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

16. Claims 4, 14, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi.

As per claim 4, Taniguchi does not specifically teach the storage media to be a disk.

However, the Examiner takes Official Notice that disks are notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi so the storage media is a disk because it would allow the storage device to be portable and used with other devices.

17. As per claims 14 and 15, Taniguchi does not teach a server performing the preprocessing of the audio data to determine the parameters associated with time scaling of the audio data and the device comprises a telephone that receives the audio data and the parameters from the server.

However, the Examiner takes Official Notice that the use of time scaling in network systems is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to perform the perform the time scaling system on a network because this would allow the

processing to be distributed on many devices throughout a network hence reducing the workload of the device.

18. As per claim 19, Taniguchi does not teach interpolating between the preprocessed offsets to determine the offset corresponding to the selected time scale.

However, the Examiner takes Official Notice that estimating a value between two known values is notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to interpolate between the preprocessed offsets to determine the offset corresponding to the selected time scale because this would allow the system to compensate when the offsets do not exactly match the selected time scale hence making the system more adaptable.

19. Claims 2, 5, 7, 8, 12, 13, 16 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi in view of Satyamurti et al. (U.S. Pat. 5,920,840).

As per claim 2, Taniguchi teaching using the audio data and the parameters to perform time scaling of the audio data (data expanding/compressing means inputs both the control signal and the audio bit stream, Fig. 1, element 103).

Taniguchi does not specifically teach or suggest performing real-time time scaling.

Satyamurti teaches a time scaling technique that is suggested to be performed in real-time (col. 10, lines 54-63).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to perform in real-time as suggested by Satyamurti because this would allow a conversation between two distinct parties to be carried out with the system without the parties being bothered by delays.

20. As per claim 5, Taniguchi does not teach transmitting the audio data and the parameters via a network to the device.

Satyamurti teaches transmitting the audio data to the voice expansion circuitry over a telecommunications network (col. 5, line 52 to col. 6, line 10).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to use the transmission teachings taught by Satyamurti to transmit both the audio data and the parameters to the device because this would allow the preprocessor to be located remotely from the time scaling device hence preventing any one processor from becoming overloaded.

21. As per claim 7, Taniguchi does not teach a plurality of offsets for each input frame, the plurality of offsets for each input frame corresponding to different time scales.

Satyamurti teaches computing an analysis segment size dynamically, which would have a corresponding time scale factor prior to scaling (col. 24, lines 10-22, col. 25, lines 22-54 and Fig. 25). Calculating a plurality of parameters for each frame is an alternative to modifying the frame size because they would both have parameters representing the time scale of sub-frame blocks.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to represent the time scaling of sub-frame

blocks as taught by Satyamurti to use a plurality of parameters for each frame because this would give a much more accurate time scaled audio waveform without the computation time needed to calculate the frame size.

22. As per claim 8, Taniguchi teaches the device performs the preprocessing of the audio data to determine the parameters and stores the audio data and the parameters for later use during real-time scaling of the audio data (system preprocesses the audio data to determine the control parameter that is used in the data expanding/compressing processing means hence it must inherently be stored or buffered in a means that can be accessed by the data expanding/compressing means and the time scaling would inherently be performed at a later time, Fig. 1).

Taniguchi does not specifically teach or suggest performing real-time time scaling.

Satyamurti teaches a time scaling technique that is suggested to be performed in real-time (col. 10, lines 54-63).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to perform in real-time as suggested by Satyamurti because this would allow a conversation between two distinct parties to be carried out with the system without the parties being bothered by delays.

23. As per claim 12, Taniguchi does not teach a voice mail system performs the preprocessing of the audio data to determine the parameters associated with time scaling of the audio data.

Satyamurti teaches using the time scaling system in a voice mail system (col. 6, lines 47-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to use the time scaling method in a voice mail system as taught by Satyamurti because it would make the system more marketable.

24. As per claim 13, Satyamurti teaches that the time-scaling technique can be included in many application such as a voice mail system and teaches the telephone would send the audio data to the voice mail system (col. 6, lines 47-67).

Neither Taniguchi nor Satyamurti teach a telephone that receives audio data and the parameters from the voice mail system.

However, the Examiner takes Official Notice that retrieving audio data from a voice mail system is notoriously well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi and Satyamurti to receive the audio data and parameters from the voice mail system because this would allow the user to retrieve the compressed audio data from the voice mail system hence giving the voice mail system functionality.

25. As per claim 16, Taniguchi teaches the device performs the preprocessing of the audio data to determine the parameters and stores the audio data and the parameters for later use during real-time scaling of the audio data (system preprocesses the audio data to determine the control parameter that is used in the data expanding/compressing processing means hence it must inherently be stored or buffered in a means that can be

accessed by the data expanding/compressing means and the time scaling would inherently be performed at a later time, Fig. 1).

Taniguchi does not specifically teach or suggest performing real-time time scaling.

Satyamurti teaches a time scaling technique that is suggested to be performed in real-time (col. 10, lines 54-63).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to perform in real-time as suggested by Satyamurti because this would allow a conversation between two distinct parties to be carried out with the system without the parties being bothered by delays.

Taniguchi and Satyamurti do not teach the device comprises a server.

However, the Examiner takes Official Notice that the use of time scaling in network systems is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to perform the perform the time scaling system on a network because this would allow the processing to be distributed on many devices throughout a network hence reducing the workload of the device.

26. As per claim 24, Taniguchi teaches the parameters comprise one or more offsets for each input frame, each offset identifying for an associated input frame a block of samples for use in generating time-scaled data from the associated input frame (determines for each frame a control signal to identify which frames to compress,

expand or perform a through process, hence a block of samples (the frame) is identified for use in time scaling, col. 13 line 66 to col. 14, line 33).

Taniguchi does not teach a plurality of offsets for each input frame, the plurality of offsets for each input frame corresponding to different time scales.

Satyamurti teaches computing an analysis segment size dynamically, which would have a corresponding time scale factor prior to scaling (col. 24, lines 10-22, col. 25, lines 22-54 and Fig. 25). Calculating a plurality of parameters for each frame is an alternative to modifying the frame size because they would both have parameters representing the time scale of sub-frame blocks.

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to represent the time scaling of sub-frame blocks as taught by Satyamurti to use a plurality of parameters for each frame because this would give a much more accurate time scaled audio waveform without the computation time needed to calculate the frame size.

27. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi in view of Covell (U.S. Pat. 5,828,994), cited by the applicant.

Taniguchi does not specifically teach the listener selecting the selected time scale for presentation of the audio.

Covell teaches a system of preprocessing prior to time scaling that allows the user to choose the compression rate (col. 8, lines 58-67).

It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Taniguchi to have the user select the time scale for presentation of the audio as taught by Covell because it would save processing time by not having to automatically calculate this value.

Conclusion

28. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okada et al. (U.S. Pat. 5,809,454) and Fujii et al. (U.S. Pat. 4,885,791) teach preprocessing audio data to determine parameters relating to speech or silence for use in time scaling. Emori (U.S. Pat. 5,995,925) teaches preprocessing the audio data to determine parameters for time scaling.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew J Sked whose telephone number is (571) 272-7627. The examiner can normally be reached on Mon-Fri (8:00 am - 4:30 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

W. R. YOUNG
PRIMARY EXAMINER

MS
6/2/05